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EP A 0018423 US 4047757

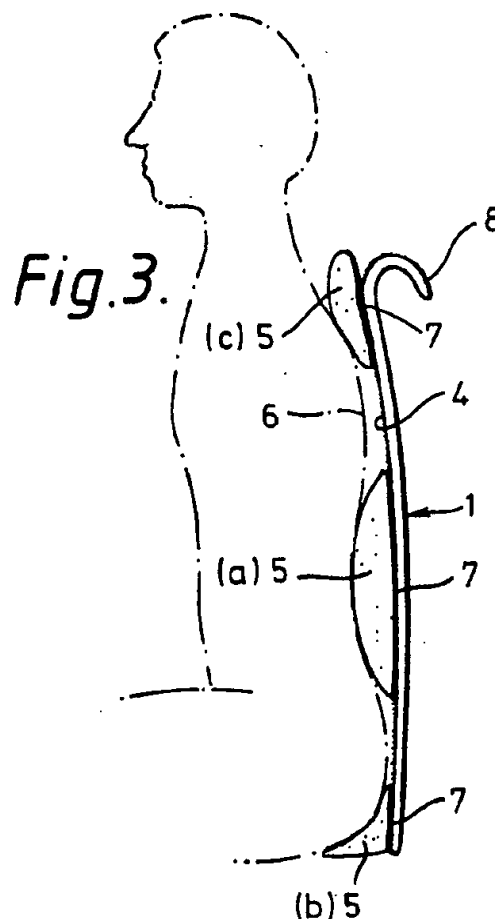
(58) Field of search

A4L

Selected US specifications from IPC sub-class A47C

(54) **Back support**

(57) The back support has two parts, a frame and one or more pads (5). The frame is contoured generally to the shape of part of a seat back and is hooked over the back of the seat to be against the front of the seat back. The or each pad is contoured to a particular portion of the human back. For example three pads (5) may be provided to conform to the lumbar region, the sacral region and the cervical region of the back (6). The frame (1) has strips (4) of VELCRO (R.T.M) material and each pad also has one or more strips (7) of similar material by means of which the or each pad (5) can be detachably secured firmly to the frame. The or each pad is positioned to give support to the users back and if desired a pad can be removed or re-positioned.



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Fig.1.

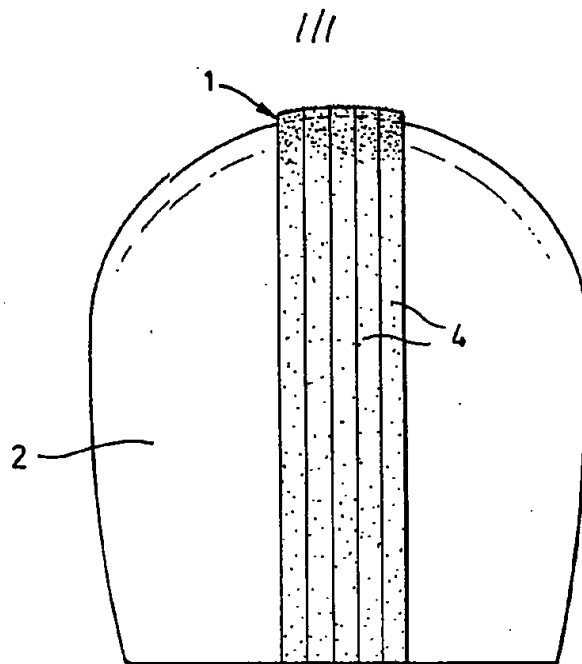


Fig.2a.

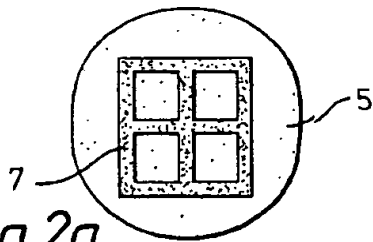


Fig.2b.

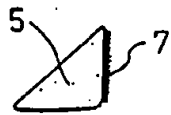


Fig.2c.

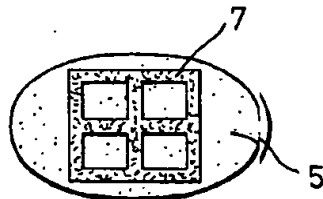
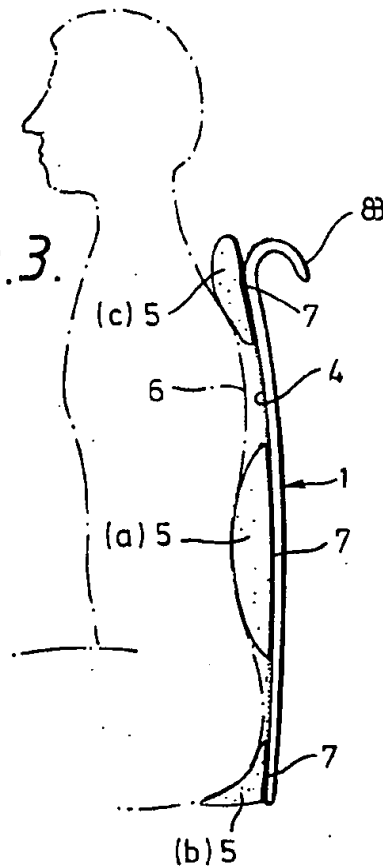


Fig.3.



SPECIFICATION

Back support

- 5 This invention relates to a support for giving support to the back of a human body when seated.

There are available a variety of one-piece back supports applicable, for example, to the
10 seat of a motor vehicle but the problem with these supports is that they tend only to support part of the human body, particularly the lumbar region. There have of course also been back supports designed specially from an
15 orthopaedic aspect but these are expensive and not suitable for universal use.

It is important that a back support to be effective should be able to support a human back, when the human is seated, to give relief
20 to what may be a painful part or parts while maintaining the rest of the back in a natural position, and an object of the present invention is to provide such a support which can be used virtually universally, is relatively inexpensive and can be adjusted to suit individual
25 requirements.

According to the invention a back support is in two parts, one part comprising a frame contoured generally to the shape of part of a
30 seat back and adapted for location at the front of the seat back and the second part comprising at least one pad shaped to conform to a particular portion of the human back, means being provided for detachably
35 mounting the pad on one face of the frame in a position to afford individual comfort, said pad being removeable from or re-positionable on the frame when desired.

Three or more pads may be provided each shaped respectively to conform to the lumbar
40 region, the sacral region, the cervical region and the dorsal region of the back.

The frame may have on the face to which a pad or pads is or are to be attached one or
45 more strips of material of the type sold under the Registered Trade Mark VELCRO, a complementary strip or strips of VELCRO type material being applied to the face of the pad to be applied to the frame.

50 An embodiment of the invention will be described by way of example only with reference to the accompanying drawings, in which:

Figure 1 is a front view of one part of a back support according to the invention applied to the back of a seat, part only of the
55 seat being illustrated;

Figures 2a, 2b and 2c are each a plan view of different forms of the second part of the back support of the invention; and

60 *Figure 3* is a side view of an outline of a human back sitting on a seat and using the back support of the invention.

Referring to the drawings, the back support comprises a first part in the form of a frame
65 of length greater than width and moulded

from plastics material generally to the contour of part of a seat back 2, such as a vehicle seat. The frame 1 is of heavy duty plastics material, such as polyvinyl chloride or nylon, which is sufficiently rigid to support the second part 5 of the back support and means 4 is provided on one face of the frame (the front face in use) to holdingly engage the second part 5, said means 4 being, for example,
70 one or more strips 4 of material of the type sold under the Registered Trade Mark VELCRO.

The or each strip 4 may be attached to the frame by, for example, adhesive, or by threading the or each strip through slots (not shown) at the upper and lower ends of the frame and folding the strip over on itself to secure the ends of the strip.
80

The part 5 is a pad filled with foam rubber contoured to conform to the part of a human back 6 to be protected. In practice at least two pads of different contours will be provided, one (Fig. 2a) being shaped to conform to the lumbar region of the human back and one (Fig. 2b) to the sacral region. A third pad (Fig. 2c) may be provided which conforms to the contours of the cervical region and a fourth pad, not shown, may also be provided conforming to the contours of the dorsal region. At least one strip 7 of VELCRO type material is secured to one face (the rear face) of a pad 5.
90

The frame 1 is preferably formed at one end, the top end when applied to a seat back 2, with a hooked portion 8, so that the frame can be hooked over the back of the seat and retained in a position against the front of the seat back.
100

In practice the frame 1 is hooked over the seat 2 with the strip or strips 4 of VELCRO exposed forwardly. One, two or all three of the pads 5 is or are attached to the frame in such wise that the strip or strips 7 on the pad firmly engages or engage the strip or strips 4 on the frame to maintain the pad or pads therein. The or each pad is located in a position which is intended to give optimum support to the users back, but if necessary, or if desired, a pad can be detached from the frame or re-positioned to afford individual comfort. In practice the lumbar and sacral region pads (Figs. 2a and 2b) are the ones most likely to be adjusted in engagement with the desired region or regions of the user's back when seated.
110

While in the embodiment described, the means for detachably mounting the pads on the frame have been discussed as being strips of VELCRO, it will be understood that other means may be used.
120

Advantages of the invention are that the frame and the pad or pads are relatively inexpensive to produce and can be standardised for virtually universal use. Further the provision
125 of three or more differently shaped pads, any

or all of which can be quickly yet firmly detachably mounted on the frame and removed when desired or position adjusted relative to the frame to suit individual requirements, al-

- 5 lows the user to find the optimum position for the or each pad to support that portion or portions of the back which is or are most likely to be subject to strain or pain when the user is seated.

10

CLAIMS

1. A back support is in two parts, one part comprising a frame contoured generally to the shape of part of a seat back and adapted
15 for location at the front of the seat back and the second part comprising at least one pad shaped to conform to a particular portion of the human back, means being provided for detachably mounting the pad on one face of
20 the frame in a position to afford individual comfort, said pad being removable from or repositionable on the frame when desired.

2. A support as claimed in claim 1 in which the frame is of length greater than
25 width.

3. A support as claimed in claim 1 in which pads are provided each shaped respectively to conform to the lumbar region, the sacral region, the cervical region and the dorsal region of the back.
30

4. A support as claimed in claim 1 in which the frame has on the face to which a pad is to be attached a strip of material intended to adhere to but be detachable from a
35 strip of material on the face of the pad to be applied to the frame.

5. A support as claimed in claim 4 in which the frame is slotted for threading through the slots of a strip of the material to
40 which the pad is to be applied.

6. A back support substantially as herein described and as illustrated by the accompanying drawings.